REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 27-42 are pending in the present application. Claims 27 and 42 are amended by the present amendment. Support for amended Claim 27 can be found in the original specification, claims and drawings.[1] No new matter is presented.

In the Office Action, the specification and Claim 42 are objected to because of minor informalities; Claims 27-33, 40 and 42 are rejected under 35 U.S.C. § 103(a) as unpatentable over Carrender et al. (U.S. Pub. 2005/0156039, herein Carrender) in view of Tiernay et al. (U.S. Pub. 2001/0050922, herein Tiernay) and Rotzoll (U.S. Pat. 5,790,946); and Claims 34-39 and 41 are rejected under 35 U.S.C. § 103(a) as unpatentable over Carrender in view of Tiernay and Rotzoll in view of one or more of Overhultz et al. (U.S. Pub. 2004/0056091, herein Overhultz), Reis et al. (U.S. Pat. 5,640,151, herein Reis) and Hermann et al. (U.S. Pub. 2003/0151513, herein Hermann).

Regarding the objection to the specification, the specification is amended to omit any embedded hyperlinks. Further, Claim 42 is amended to recite "higher power consumption" instead of "power higher consumption", as recommended in the Office Action.

Accordingly, Applicants respectfully request that the objections to the specification and Claim 42 be withdrawn.

The Office Action rejects Claims 27-33, 40 and 42 under 35 U.S.C. § 103(a) as unpatentable over Carrender in view of Tiernay and Rotzoll. In response to this rejection, Applicants respectfully submit that amended independent Claim 27 recites novel features clearly not taught or rendered obvious by the applied references.

[1] e.g., specification at p. 15, ll. 14-20; p. 16, ll. 5-11; p. 19, ll. 1-4; p. 21, l. 4; and p. 22, ll. 1-13.

Independent Claim 27, for example, is amended to recite, in part, a heterogeneous wireless data transmission network comprising:

> a master node;
> a passive slave node including ***a first passive receiver*** and a first passive transmitter configured to modulate and reflect external RF signals, said passive slave node being configured to transmit data to the master node by modulated backscatter communication using the first passive transmitter ...
> wherein the master node is configured to wake up the passive slave node or the active slave node from a sleep state at any time by transmitting a wake-up signal to the passive slave node or the active slave node, and
> the first passive receiver is configured to receive the wake-up signal and ***the first passive transmitter is configured to transmit data after the passive slave node is woken up from the sleep state***.

Turning to the applied references, Carrender describes an identification system including a radio frequency identification reader and a plurality of tags, wherein the system uses either passive or semi-passive active backscatter transponders as tags.[2] Furthermore, Carrender describes that the class III tag has an energy source to support increased reading range and the class IV tag is an active tag that can wirelessly communicate with each other and/or other devices.[3]

Tiernay, one of the applied secondary references, describes a multiple protocol transponder capable of both active transmission or modulated backscatter transmission.[4] Tiernay further describes that multiple antennas may be used to separately receive and transmit or to transmit by active or backscatter methods.[5]

As conceded at p. 4 of the Office Action, however, the combination of Carrender and Tiernay fails to disclose a master node that wakes up the passive node from a sleep state by transmitting a wake-up signal. Therefore, Carrender and Tiernay also fail to disclose that the passive node includes a "first passive receiver ... configured to receive the wake-up signal"

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[2] Carrender ¶ [0018].
[3] Id., ¶¶ [0030-0031].
[4] Tiernay, ¶ [0050].
[5] Id., ¶ [0051].

and a "***first passive transmitter ... configured to transmit data after the passive slave node is woken up from the sleep state***", as recited in amended independent Claim 27.

In an attempt to remedy the deficiencies of Carrender and Tiernay with regard to a master node that wakes up the passive node from a sleep state by transmitting a wake-up signal, the Office Action relies on col. 2, l. 36 – col. 3, l. 26 of Rotzoll.

These cited portions of Rotzoll describe a wake up device for a communications system, wherein a receiver is woken up by a wake up signal. In response to receiving the wake-up signal, the receiver generates a mode switch signal to change the mode of the receiver from sleep mode to active mode.

Rotzoll, however, fails to disclose that the receiver includes "a first passive transmitter", as recited in independent Claim 27, much less that "***the first passive transmitter is configured to transmit data after the passive slave node is woken up from the sleep state***", which is also a feature required by amended independent Claim 27.

Therefore, Carrender, Tiernay and Rotzoll, even if combined, fail to disclose all of the features recited in amended independent Claim 27.

Furthermore, the combination does make obvious the missing feature of "first passive transmitter is configured to transmit data after the passive slave node is woken up from the sleep state". The object of Rotzoll is to provide substantial energy savings for the receiver, but Rotzoll is silent with regard to a first passive transmitter being woken up. Although Rotzoll describes the use of an RFID tag, the power in the tag is used for the receiver and no mention is made with respect to powering a transmitter. Moreover, Carrender describes that for a class III tag, the power is used to increase the receiving range. Thus, it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Carrender, Tiernay and Rotzoll to include a first passive transmitter with backscatter communication to transmit data after the passive slave node is woken up.

Accordingly, for at least the reasons discussed above, Applicants respectfully request that the rejection of Claim 27 (and the claims that depend therefrom) under 35 U.S.C. § 103 be withdrawn.

Regarding the rejection of Claims 34-39 and 41 under 35 U.S.C. § 103(a) as unpatentable over Carrender in view of Tiernay and Rotzoll in view of one or more of Overhultz, Reis and Hermann, Applicants note that these claims each ultimately depend from independent Claim 27 and are believed to be patentable for at least the reasons discussed above. Moreover, none of Overhultz, Reis or Hermann remedies the above noted deficiencies of Carrender, Tiernay and Rotzoll.

Accordingly, Applicants respectfully request that the rejection of Claims 34-39 and 41 under 35 U.S.C. § 103 be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 27-42 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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